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September 2, 1999

Ms. Magalie Roman Salas  
Secretary  
Federal Communications Commission  
445 12<sup>th</sup> Street NW  
Washington, DC 20554

RECEIVED  
SEP 02 1999  
FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

Re: Spectrum Aggregation Limits for Wireless Telecommunications  
Carriers and Wireless E911 Phase II Automatic Location Identification  
Requirements, WT Docket No 98-205, and CC Docket No. 94-102,  
DA 99-1049, respectively Ex Parte

Dear Ms. Salas:

This is to inform you that on September 1, 1999, Mark Feidler, President of BellSouth Mobility, Inc. phoned Thomas J. Sugrue, Chief of The Wireless Telecommunications Bureau and discussed issues involved in the above mentioned proceedings. The major points discussed are highlighted in the attached documents which were previously filed at the Commission for the associated records of these proceedings.

Please associate this notification with the above referenced docket items. If there are any questions concerning this matter, please contact the undersigned.

Sincerely,



Ben G. Almond  
Vice President – Federal Regulatory

cc: Thomas J. Sugrue

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## **THE CMRS SPECTRUM CAP — A SERIOUS IMPEDIMENT TO U.S. DEPLOYMENT OF 3G WIRELESS SERVICE**

The United States should be a leader in the development and implementation of new, advanced wireless services. Third-generation ("3G") wireless technology will provide consumers with wireless access to data, multimedia, internet, and many other services beyond today's mobile phone and paging service. U.S. leadership potential is endangered, however, by the so-called CMRS spectrum cap, Rule Section 20.6, which limits wireless carriers to about 45 MHz of cellular, PCS, and SMR spectrum. This rule virtually ensures that other nations will receive the benefits of advanced 3G services earlier and more extensively than the United States, to the detriment of American consumers, because it denies U.S. carriers the flexibility to acquire available spectrum that is being underused and commit it to the provision of new and better services to the public. As we show, the only solution to this serious problem is to eliminate the spectrum cap now.

The companies best positioned to bring 3G to market and make these new and exciting broadband services available to consumers throughout the nation are the country's major wireless service providers — companies such as BellSouth, AT&T, and Vodafone AirTouch. These companies have the financial and technical expertise, and the depth of experience in the wireless industry, needed to make 3G a success in the United States. They can do so, however, only if the Commission gives them the flexibility to respond to the public's ever-growing demand for new and better services.

Unfortunately, these companies are the ones who will have the most difficulty in deploying broadband 3G services because they are currently using a significant portion of the allowable 45 MHz of wireless spectrum to provide wireless phone and related services to the public. (For example, under the current rule, BellSouth cannot acquire an additional 20 or 30 MHz of PCS spectrum where it already holds a 25 MHz cellular license or a 30 MHz PCS license, together with an SMR license used for wireless data service.) If the 45 MHz spectrum cap remains in place, they will be severely constricted in their ability to provide broadband 3G services, which will require more spectrum than is currently permitted if the carriers continue to provide traditional forms of service. The only spectrum that can readily be used for rapid introduction of these new services is the spectrum already allocated to cellular, PCS, and SMR and held by licensees — spectrum that is specifically subject to the cap. As a result, companies will not be able to acquire the additional spectrum that will be needed to deploy broadband 3G services quickly and efficiently.

Just how much additional CMRS spectrum is needed to support the deployment of 3G services depends on a number of factors including technology choice, current penetration levels and the demand for 3G services. Over the long term, major U. S. Service providers of broadband 3G services are expected to need somewhere between 70 and 90 MHz. However, the amount of spectrum incumbent carriers need in the existing CMRS blocks depends on what CMRS spectrum is available for purchase in a given market. Consequently, incumbent carriers need the flexibility to own at least 60 or 65 MHz of the spectrum currently subject to the cap. This would allow a carrier with a 30 MHz PCS license or a 25 MHz cellular license and up to 5 MHz of SMR spectrum to purchase up to an additional 30 MHz PCS license.

Even 65 MHz will not be sufficient for some carriers in a given market unless the current cellular geographic overlap and attribution rules are not relaxed. (For example, BellSouth holds a 10 MHz license in at least one of its BTA markets and is also attributed 25 MHz due to a small cellular overlap in the BTA and approximately 5 MHz due to its wireless data SMR service. In this BTA, BellSouth would be prohibited from acquiring a 30 MHz PCS license unless it was willing to sell its existing PCS or cellular business in the BTA.)

The Commission should reexamine the spectrum cap *now* and make a firm decision that the spectrum cap will be lifted as of a date certain. Relief is needed right away because carriers must begin making commitments now in order to bring 3G services to market quickly. 3G equipment will become available by early 2000, meaning that contracts will have to be negotiated with vendors by mid-to-late 2000 to have access to equipment for an early roll-out. Needless to say, U.S. carriers will be competing against those from other nations in seeking commitments from vendors. Without assurance that they will be able to acquire sufficient spectrum to deploy new services, it will be difficult for them to make firm commitments to vendors during the negotiations that will have to take place in early 2000, while their competitors from other nations will not be so constrained. In short, without assurance *very soon* that the spectrum cap will be lifted by mid-2001 at the latest, U.S. carriers will be at a profound disadvantage in the negotiations needed for a quick rollout of 3G service.

The spectrum cap also casts a shadow on U.S. carriers' willingness to make the financial commitments needed to plan deployment, because there is no certainty that they will be able to acquire the spectrum needed — even if there are willing sellers of the spectrum blocks needed.

There is spectrum that major wireless carriers *could* acquire for 3G deployment, but for the spectrum cap — namely, spectrum already allocated and licensed for cellular, PCS, and SMR service. As the Commission knows, there are plenty of undercapitalized wireless licensees who acquired spectrum in auctions designed to promote new entry. Many of those licensees are in bankruptcy or near it. Even if those companies, who have vacant spectrum and the ability (under the rule) to acquire more, wanted to provide 3G services, they do not have the financial wherewithal, the technical expertise, or the experience needed to make a success of it. Elimination of the spectrum cap would allow these companies to work with experienced wireless companies to put their spectrum to productive use.

The only option that will ensure that the U.S. can lead the world in bringing new 3G services to its consumers is *full elimination of the spectrum cap*. All of the alternatives to full elimination will seriously impede carriers in their efforts to deploy 3G services quickly:

- A *sunset date* will not do the job, because carriers will not have the certain ability to acquire spectrum in time to negotiate deals with vendors by mid-2000. BellSouth had previously considered a sunset to be a livable alternative, but given the rapid pace of 3G development and the level of competition in the wireless industry worldwide, this clearly will no longer allow U.S. companies to compete with carriers from other nations in negotiating favorable equipment supply contracts.

- *Merely increasing the cap* will not work, either. Carriers need to know that as demand grows, they will be able to compete with other carriers for additional spectrum resources in order to continue growing their businesses. Moreover, as carriers increase the variety of services that they offer, they will need access to additional spectrum for those services.
- *Adjusting the overlap and attribution rules* applicable to the cap also falls short. These rules promote the development of complex joint venture or partnership arrangements designed primarily to satisfy the rules. These rules do not allow experienced, financially capable carriers to use the venture's spectrum as their own, in a single integrated business focused on providing the best possible service to the public. The rules impede operating and marketing flexibility and thereby increase business and investment risks. Moreover, it takes considerable time to negotiate and establish the complex relationships required. All of these factors make clear that even substantially liberalized overlap and attribution rules will severely handicap U.S. carriers in deploying 3G services.
- *Forbearance* from the existing cap will not help, either. Leaving the cap on the books but not enforcing it for the time being simply does not give businesses the level of assurance needed to commit billions of dollars to a multi-year business rollout. If the rule remains in place, there will always be the risk that it will someday be enforced. This places a cloud on carriers' willingness to make the substantial commitment to 3G that is necessary to ensure that the United States will be a leader in the world 3G marketplace.

The Commission is understandably concerned about the competitive effects of eliminating the cap. Such concerns are not a reason for maintaining the cap, however. With or without a cap, any company acquiring spectrum from another licensee will have to file applications for consent to assignments of licenses or transfers of control, pursuant to Section 310(d). These applications give the Commission a full opportunity to consider the competitive ramifications of the acquisition, including antitrust concerns regarding industry concentration, and balance these factors against the public interest in developing a strong domestic 3G service. Given the worldwide pace of 3G development, the American consumer will be better served by a case-by-case analysis of such issues than by a rule that guarantees the U.S. will continue to lag behind other nations.

Ex Parte Presentation:

BellSouth Cellular Corp  
FCC WT Docket No. 98-205  
CMRS Spectrum Cap

September 1, 1999

# BellSouth's Position

- FCC should immediately eliminate the 45 MHz CMRS Spectrum Cap
- Elimination of the Cap is needed to support early deployment of Third Generation (3G) wireless service

I. Removal of 45 MHz CMRS Cap is Good Spectrum Management Policy.

- Allows currently available CMRS spectrum to be used to accelerate roll-out of 3G services
- Near term deployment of 3G technology improves US position to influence vendors and international standards

II. After further review, BellSouth concludes that a Sunset on the cap is not an appropriate compromise.

- Migration timeline for 3G services demands spectrum be made available in early 2000
- Any delay imposed by a Future Sunset Date will:
  - Delay services to consumers
  - Negatively impact US position to influence 3G direction
- Eliminating the Cap does not reverse competitive trends in the market.



### III. Elimination of Cap is needed to spur early deployment of 3G Systems.

- 2 deployment strategies for 3G
  - acquire additional CMRS spectrum
  - “carve out” from currently held licenses

Use of additional CMRS spectrum is much more cost efficient and less complex to implement.

- 3G Equipment to be available in mid-2001, spectrum needed in early 2000.

#### A USA First to Market Scenario

- |                             |            |
|-----------------------------|------------|
| – 3G system in service      | Dec/2001   |
| – Availability of equipment | June/2001  |
| – Contracts for equipment   | Sept/2000  |
| – Spectrum “in hand”        | Early/2000 |

### III. (cont.)

- Spectrum needs for 3G will vary by provider, services offered, technology and market demand
  - Long term .... Major providers are expected to need from 70 to 90 MHz
  - For early deployment .... Carriers need *flexibility* to own at least 60 to 65 MHz of the CMRS spectrum subject to the cap
  - Even 65 MHz will not be sufficient in some cases

#### IV. Other alternatives are insufficient to encourage 3G deployment.

- An increase in the Spectrum Cap is at odds with 3G business needs
  - Market demand will drive the need for spectrum
  - Carriers need to be able to negotiate for various spectrum amounts
  - Carriers need certainty of spectrum availability prior to investing
  - Would create need to petition for further relief in the future
- Adjustments in attribution and overlap rules are not sufficient incentives to encourage partnering.
  - Industry trend is toward mergers and acquisitions, not partnerships
  - Time to market for 3G would be negatively impacted
  - Partnerships substantially increase business risks and complexity

V. Other mechanisms exist to provide adequate protection against spectrum warehousing and abuse.

- Federal Antitrust laws continue to apply
- FCC application process provides case-by case opportunity for review
- Basic business economics will not allow meaningful abuse by carriers

# BellSouth Position Summary

**Problem:** The Industry needs immediate flexibility to obtain CMRS spectrum for 3G deployment.

**Solution:** BellSouth recommends full elimination of the 45 MHz CMRS cap.

# Ex Parte Presentation:

BellSouth Cellular Corp.

FCC Docket No. 94-102

E911 Location Technologies

August 26, 1999

# Accuracy

- To date, BellSouth has not identified any location equipment that conclusively meets the current FCC accuracy requirements
  - BellSouth has tested or has been involved in tests of three different LCS systems
  - Many calls were not located at all
  - The specific tests performed by BellSouth did not meet the 125 m accuracy requirement (on average or by 67% cumulative probability)
- Despite vendor claims, there remain major stumbling blocks for location technology equipment
  - Location within the central parts of certain buildings (large office buildings, shopping malls, parking garages, below-ground floors) is not possible in most cases with any technology
  - Network-based location equipment cannot currently deal with cellular repeaters and some types of microcells
- BellSouth is still uncertain how we can demonstrate compliance with FCC accuracy requirements

# Latency

- Latency (the time it takes to determine a position and communicate the position to a PSAP) remains a problem for handset-based GPS solutions.
- Non-network-assisted GPS may typically take 30 seconds for a first fix.
- Even with ideal GPS coverage, a non-network-assisted handset could take 15 minutes or more for a first fix, assuming a cold start and that the user has traveled a great distance (e.g., on an airplane) from his/her last position
- Network-assisted GPS handsets can obtain shorter latency periods, but vendors are still indicating best-case of 5 – 15 seconds. This is not fast enough to route an emergency call.



# **Availability of Technology**

- Location equipment for certain air-interface technologies is not currently available, even in prototype versions
- BellSouth is not aware of any vendor currently offering network-based location equipment for GSM/PCS1900 networks
- Availability of prototype GSM/PCS1900 network-based equipment is expected in 2Q 2000
- Assuming best-case time scales for development of prototypes, vendor testing, operator trials, and mass production of equipment, it would be difficult or impossible to meet the 10/1/2001 deadline for a network-based GSM/PCS1900 solution

# Handset Penetration

- Handset manufacturers have not committed to location capable (LC) handset availability dates.
- The actual “cost to consumer” of handset location features is unknown.
- Handset turnover is dependent upon many factors:
  - customer use
  - availability of new services
  - cost of handset
- It is not possible to predict PSAP readiness for Phase II location information.

It is premature for the Commission to establish LC handset penetration levels at this time.

# **BellSouth's Role**

- Subject to non-disclosure agreements, BellSouth will work with the FCC to share testing strategies and test results, for the purpose of facilitating a better understanding of LCS capabilities with respect to accuracy and latency.
- BellSouth will continue to evaluate and test a variety of LCS systems, in order to select the most reliable and cost effective solutions available.
- BellSouth is committed to work with all affected groups in order to meet its Phase II E911 obligations.